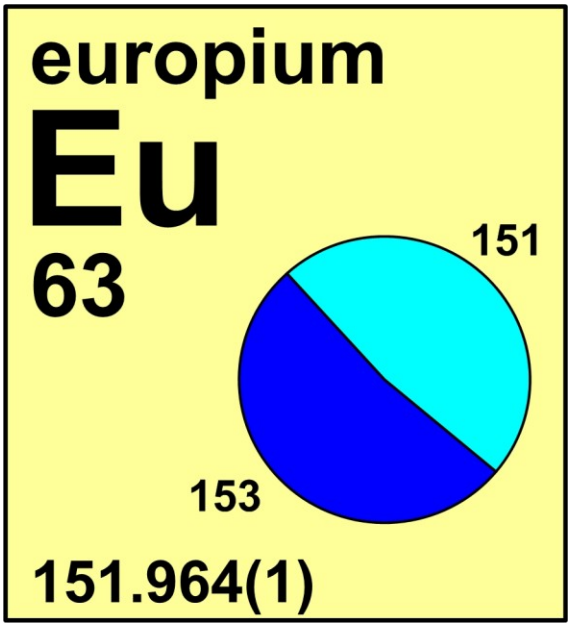
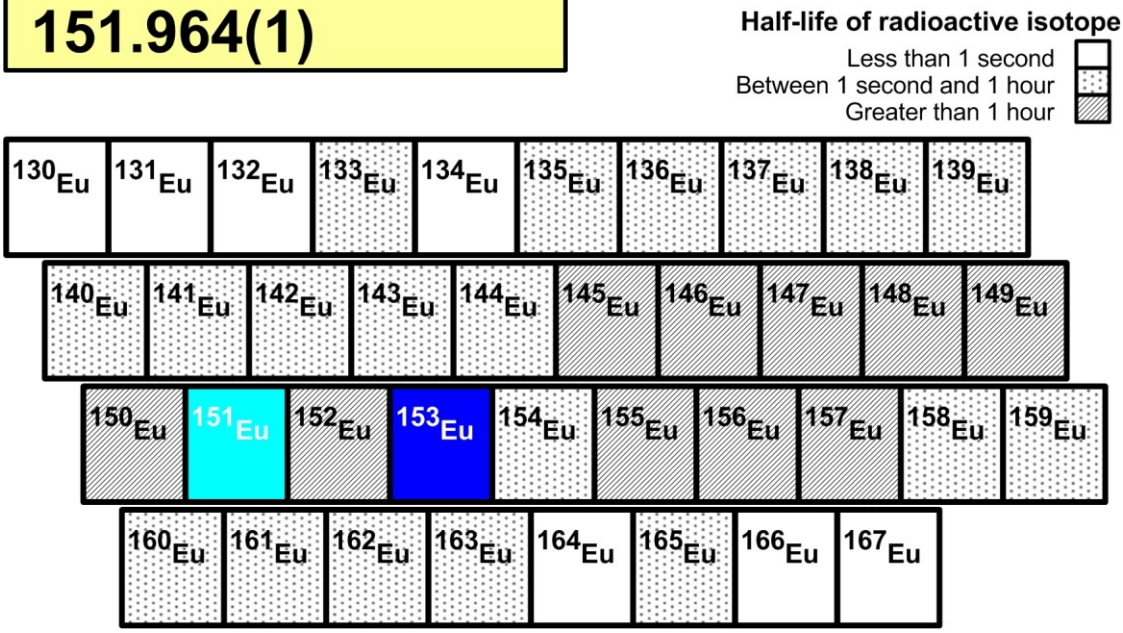
europium



Stable isotope	Atomic mass*	Mole fraction
^{151}Eu	150.919 8502	0.4781
^{153}Eu	152.921 2303	0.5219

* Atomic mass given in unified atomic mass units, u.



Important applications of stable and/or radioactive isotopes

Isotopes in medicine

1) ^{151}Eu is used for the production of ^{152}Eu which is used as a reference source in gamma spectroscopy.
2) ^{153}Eu can be used for the production of high specific activity ^{153}Sm via fast neutron irradiation.

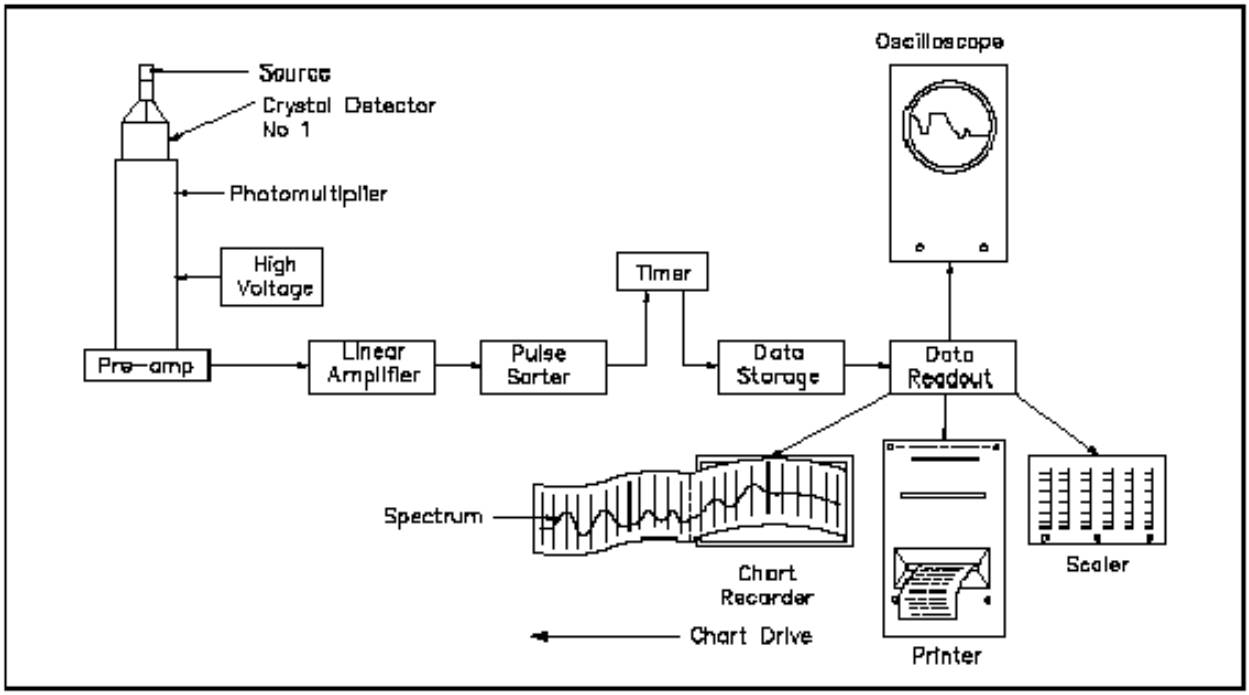


Figure 1: This is a diagram of a gamma spectrometer. ^{152}Eu can be used as a reference in this type of machine.

Isotopes in industry

1) Eu isotopes are currently being studied for possible use in nuclear control applications because they are good neutron absorbers.

**Applications of europium isotopes are still being researched and this page will be updated shortly. **